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TRANSMITTAL FORM

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Application Number	10/602,548
Filing Date	June 23, 2003
First Named Inventor	Tang, Hongxing
Art Unit	2855
Examiner Name	Allen, Andre J.
Attorney Docket Number	009195-000520US

Submission					
		ENCLOSURE	S (Check all that appl	y)	
Fee Transmittal Form		☐ Drawing(s)		After A	Allowance Communication to Group
Fee Attached		Licensing-related Papers			al Communication to Board of Appeals nterferences
Amendment/Reply		Petition		Appea Notice	al Communication to Group (Appeal s, Brief, Reply Brief)
After Final		Petition to Conv Provisional App		☐ Propri	ietary Information
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Express Abandonment F	Request	CD, Number of	CD(s)		al Search Report s Cited (23)
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Certified Copy of Priority	li		The Commissioner is	authorized to	charge any additional fees to Deposit
Document(s)		Remarks	Account 20-1430.		
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Response to Missir under 37 CFR 1.52					
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or Individual Geral	ld T. Gray		Reg. N	o. 41,797	
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Date May 5, 2004					
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TOWNSEND and TOWNSEND and CREW LLP

Marta R. Vanegas

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hongxing Tang et al.

Application No.: 10/602,548

Filed: June 23, 2003

For: SENSORS BASED ON GIANT PLANAR HALL EFFECT IN DILUTE MAGNETIC SEMICONDUCTORS

Examiner: Allen, Andre J.

Art Unit: 2855

INFORMATION DISCLOSURE

STATEMENT UNDER 37 CFR §1.97 and

§1.98

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Also enclosed is a copy of the International Search Report for the corresponding PCT application, PCT/US03/19863.

Hongxing Tang et al.

Application No.: 10/602,548

Page 2

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that <u>no fee is required</u> for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

Gerald T. Gray Reg. No. 41,797

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, Eighth Floor San Francisco, California 94111-3834

Tel: 925-472-5000 Fax: 925-472-8895

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

	Complete if Known
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	U.S. PATENT DOCUMENTS+				
		Document Number			
Examiner Initials*	Cite No. ¹	Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-3,818,328	06-18-1974	Zinn	
	2	US-4,618,901	10-21-1986	Hatakeyama et al.	
	3	US-4,816,946	03-28-1989	Kira et al.	
	4	US-5,390,061	02-14-1995	Nakatani et al.	
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Examiner	Cite Foreign Patent Document		ů .		Name of Patentee or	Pages, Columns, Lines, Where Relevant		
Initials*	No.1	Country Code ³	Number ⁴	Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Date Applicant of Cited	Passages or Relevant Figures Appear	
	5	wo	2004/001805	A2	12-31-2004	California Institute of Technology		
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Sheet	2	of	3	

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		NON PATENT LITERATURE DOCUMENTS	
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	6	Abolfath, M. et al., "Theory of magnetic anisotropy in III _{1-x} Mn _x V Ferromagnets," Phys. Rev. B., Vol. 63, p. 054418 (2001)	
	7	Cowburn, R.P. et al., "Multijump magnetic switching in in-plane magnetized ultrathin epitaxial Ag/Fe/Ag(001) films," Phys. Rev. Lett. , Vol. 79, p. 4018 (1997)	
	8	Dietl, R. et al., "Hole-mediated ferromagnetism in tetrahedrally coordinated semiconductors," Phys. Rev. B, Vol. 63, p. 195205 (2001)	
1-10	9	Dietl, R. et al., "Zener model description of ferromagnetism in zinc-blende magnetic semiconductors," Science , Vol. 287, p. 1019 (2000)	
-	10	Divincenzo, D.P., "Quantum computing and single-qubit measurements using the spin-filter effect (invited)," J. Appl. Phys., Vol. 85, p. 4785 (1999)	
	11	Fukumura, T. et al., "Magnetic domain structure of a ferromagnetic semiconductor (Ga,Mn)As observed with scanning probe microscopes," Physica E. , Vol. 10., p. 135 (2001)	
	12	Gwo, S. et al. "Surface reconstruction and ultrasmooth morphology of high-temperature grown A1As(001)-3x2," Proc. 23rd Int. Conf. Phys. Semiconductors , Berlin 1996, Scheffler, M. and R. Zimmermann, eds., World Scientific, Singapore (1996)	
	13	Hong, K. and N. Giordano, "Approach to microscopic magnetic measurements," Phys. Rev., Vol. 51, No. 15, p. 9855 (1995)	3
	14	Jan, J.P., "Galvanomagnetic and thermomagnetic effects in metals," in Solid State Physics, Seitz, F. and D. Turnbull, eds., New York Academic Press, Vol. 5, pp. 1-96	
	.15	König, J. et al., "Theory of magnetic properties and spin-wave dispersion for ferromagnetic (Ga,Mn)As," Phys. Rev. B., Vol. 64, p. 194423 (2001)	
	16	Ma, Z. et al., "Solid-state reaction-mediated low-temperature bonding of GaAs and InP wafers to Si substrates," Appl. Phys. Lett., Vol. 64, No. 6, p. 772 (1994)	
	17	Ohno, H. et al., "Electric-field control of ferromagnetism," Nature, Vol. 401, p. 944 (2000)	
	18	Ono, T. et al., "Propagation of a magnetic domain wall in a submicrometer magnetic wire," Science, Vol. 284, p. 468 (1999)	
	19	Prinz, G., "Magnetoelectronics," <u>Science</u> , Vol. 282, p. 1660 (1998)	
	20	Sander, D. et al., "Film stress and domain wall pinning in sesquilayer iron films on W(110)" Phys. Rev. Lett., Vol. 77, p. 2566 (1996)	
	21	Schmidt, G. and L.W. Mollenkamp, "Electrical spin injection using dilute magnetic semiconductors" Phisica E., Vol. 10, p. 84 (2001)	

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	22	Stoner, E.C. and E.P. Wohlfarth, "A mechanism of magnetic hysteresis in heterogeneous alloys," Philos. Trans. R. Soc. London A, Vol. 240, p. 74 (1948)				
	23	Wunderlich, J. et al., "Influence of geometry on domain wall propagation in a mesoscopic wire" IEEE Trans. Magn. Vol. 37, p. 2104 (2001)				

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